

Group III      Claims 12-14, drawn to method for correcting the acoustic response of a listening environment by measuring the impulse response of the environment and deriving and employing a corresponding compensatory process;

Group IV      Claims 19-26, 33, and 34, drawn to method and corresponding apparatus for creating a difference in dynamics among sound streams and adding predictable environmental characteristics.

Applicants respectfully disagree. Applicants note that claims in Groups I-IV are technically interrelated and belong to a general concept, namely, methods and systems for enhancing audio data. In particular, these methods and systems contain two special technical features: (i) pre-emphasizing frequencies and dynamics expected to be lost or distorted, as well as (ii) recovering frequencies and dynamics preserved by pre-emphasis of the frequencies and dynamics, wherein the frequencies and dynamics expected to be lost or distorted in (i) and (ii) are due at least in part to compression and transmission.

Claim 1 in Examiner's Group I recites explicitly the technical features (i) and (ii). Each of the independent claims 6, 12, 15, 18, 19, 25, 27, 33, and 34, and their respective dependent claims recite elements (i) and/or (ii) described above.

Claim 6 in Examiner's Group II recites a method comprising separating the audio signal into component signals, processing the component signals, aggregating processed component signals, and further performing additional post-processing on the aggregated signal. The method further comprises post-processing methods to recover frequencies and dynamics in claim 10. For instance, the look-ahead automatic gain control element recited in claim 10 corrects for distortions due to compression.

Claims 11-14 in Examiner's Groups II and III describe the method used to compensate "for audio equipment operated in a poor acoustic environment." Additionally, this compensatory process is used "to de-emphasize resonances or filtering in the listener's room, and to provide for a reduction in the room's perceived ambient noise level" (page 17, lines 27-30), restoring frequencies and dynamics expected to be lost due to transmission.

Claims 19-24 in Examiner's Group IV recite a method comprising of compressing a modified audio signal and inserting reflection components to the modified audio signal. As recited in claim 24, such method is used to pre-emphasize the frequencies and dynamics of the audio signal by processing and compressing the signal according to different sets of characteristics. Furthermore, claims 25 and 26, also in Examiner's Group IV, recite a method that enhances the dynamics of the signal received, by creating differences in dynamics of sound streams, adding predictable environment characteristics, and inserting sound field enhancing features.

Finally, claims 15-17 in Examiner's Group II are the corresponding system claims for claims 8-10 and recite technical feature (ii). Claim 18 in Examiner's Group II is the corresponding apparatus claim for claim 6 and recites technical feature (ii). Claims 27-32 in Examiner's Group II are the corresponding system claims for claims 20-24 and recite technical feature (i). Claim 33 in Examiner's Group IV is the corresponding apparatus claim for claims 19-24 and recites technical feature (ii). Claim 34 in Examiner's Group IV is the corresponding apparatus claim for claims 25-26 and recites technical feature (ii).